

## WHAT IS CLAIMED IS:

1. An immunogenically active component which comprises a member selected from the group consisting of merozoite antibody inducing, inactivated *Sarcocystis neurona* cells; tachyzoite antibody inducing, inactivated *Neospora hughesi* cells; a merozoite or tachyzoite antibody inducing antigen derived from said cells; DNA derived from said cells capable of inducing a merozoite or tachyzoite antibody immune response; and a mixture thereof.

2. The component according to claim 1 which comprises inactivated *Sarcocystis neurona* cells; an antigen derived from said cells; DNA derived from said cells; or a mixture thereof.

3. The component according to claim 1 which comprises inactivated *Neospora hughesi* cells; an antigen derived from said cells; DNA derived from said cells; or a mixture thereof.

4. The component according to claim 1 wherein said active component is present in sufficient quantity to provide at least  $1 \times 10^4$  inactivated cells per unit dose form.

5. A vaccine composition which comprises an effective immunizing amount of the immunogenically active component of claim 1, a pharmacologically acceptable carrier; and optionally an immunogenically stimulating 5 adjuvant.

6. The vaccine composition according to claim 5 wherein said active component is present in sufficient quantity to provide at least  $1 \times 10^4$  inactivated cells per 10 unit dose form.

7. The vaccine composition according to claim 5 wherein said active component is present in sufficient quantity to provide at least  $1 \times 10^6$  inactivated cells per 15 unit dose form.

8. The vaccine composition of claim 2 wherein said active component is present in an amount sufficient to produce a merozoite inducing serum neutralizing antibody 20 response which is protozocidal.

9. The vaccine composition of claim 3 wherein said active component is present in an amount sufficient to produce a tachyzoite inducing serum neutralizing antibody 25 response which is protozocidal.

10. The vaccine composition according to claim 5 wherein the immunogenically stimulating adjuvant is present at about 1% to 50% wt/wt.

11. The vaccine composition according to claim 10 wherein said adjuvant is present at about 5% to 20% wt/wt.

5 12. The vaccine composition according to claim 10 wherein said active component comprises inactivated *Sarcocystis neurona* cells.

10 13. The vaccine composition according to claim 12 wherein said adjuvant is a metabolizable oil.

15 14. The vaccine composition according to Claim 13 wherein the pharmacologically acceptable carrier is a balanced salt solution.

15 15. A vaccine composition for the prevention or amelioration of EPM disease in equines comprising,  
- a first immunogenically active component selected from the group consisting of merozoite antibody inducing,  
20 inactivated *Sarcocystis neurona* cells; a merozoite antibody inducing antigen derived from said cells; DNA derived from said cells capable of inducing a merozoite antibody immune response; or a mixture thereof;  
- a second immunogenically active component selected from the group consisting of tachyzoite antibody inducing, inactivated *Neospora hughesi* cells; a tachyzoite antibody inducing antigen derived from said cells; DNA derived from said cells capable of inducing a tachyzoite antibody immune response; or a mixture thereof;  
25 - a pharmacologically acceptable carrier; and optionally an immunogenically stimulating adjuvant.

16. The vaccine composition according to claim 15 wherein said first immunologically active component comprises inactivated *Sarcocystis neurona* cells and said 5 second immunologically effective component comprises inactivated *Neospora hughesi* cells.

17. The vaccine composition according to claim 15 wherein said first immunologically active component is 10 present in an amount sufficient to produce a merozoite inducing serum neutralizing antibody response which is protozocidal, and wherein said second immunologically active component is present in an amount sufficient to produce a tachyzoite inducing serum neutralizing antibody 15 response which is protozocidal.

18. A method for the prevention or amelioration of EPM disease in equines which comprises administering to 20 said equine an immunogenically active component which comprises a member selected from the group consisting of merozoite antibody inducing, inactivated *Sarcocystis neurona* cells; tachyzoite antibody inducing, inactivated *Neospora hughesi* cells; a merozoite or tachyzoite antibody inducing antigen derived from said cells; DNA 25 derived from said cells capable of inducing a merozoite or tachyzoite antibody immune response; or a mixture thereof.

19. A method for the prevention or amelioration of 30 EPM disease in equines which comprises administering to said equine a vaccine composition which comprises,

5 - an effective immunizing amount of an immunogenically active component which comprises a member selected from the group consisting of merozoite antibody inducing, inactivated *Sarcocystis neurona* cells; tachyzoite antibody inducing, inactivated *Neospora hughesi* cells; a merozoite or tachyzoite antibody inducing antigen derived from said cells; DNA derived from said cells capable of inducing a merozoite or tachyzoite antibody immune response; or a mixture thereof; and

10 - a pharmacologically acceptable carrier; and optionally an immunogenically stimulating adjuvant.

20. A method for the prevention or amelioration of EPM disease in equines which comprises administering to said equine a vaccine composition which comprises,

15 - a first immunogenically active component selected from the group consisting of merozoite antibody inducing, inactivated *Sarcocystis neurona* cells; a merozoite antibody inducing antigen derived from said cells; DNA derived from said cells capable of inducing a merozoite antibody immune response; or a mixture thereof;

20 - a second immunogenically active component selected from the group consisting of tachyzoite antibody inducing, inactivated *Neospora hughesi* cells; a tachyzoite antibody inducing antigen derived from said cells; DNA derived from said cells capable of inducing a tachyzoite antibody immune response; or a mixture thereof;

25 - a pharmacologically acceptable carrier; and optionally an immunogenically stimulating adjuvant.

21. The method according to claim 18 wherein said vaccine is administered parenterally.

22. The method according to claim 18 wherein said vaccine is administered intramuscularly.

~~23. A method for the cell culture propagation of Sarcocystis neurona or Neospora hughesi protozoan parasite which comprises:~~

- 10 a) growing a monolayer of cells having a confluency of 80%-100%;
- b) refeeding said cells with supplemented growth media;
- c) inoculating said cells with merozoites or 15 tachyzoites;
- d) holding the inoculated cells for 4-12 days;
- e) decanting the supplemented growth media from the inoculated cells; and
- f) refeeding said cells a second time with 20 supplemented growth media.

24. The method according to claim 23 wherein the cells are selected from the group consisting of Equine Dermal cells; Maiden Darby Bovine Kidney cells; African 25 Green Monkey Kidney cells; Canine Monocyte cells; Mouse Monocyte cells; Fetal Rhesus Monkey Kidney cells; Feline Kidney cells, Maiden Darby Canine Kidney cells; and Baby Hamster Kidney cells.

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25. The method according to claim 23 wherein the cells are Equine Dermal cells or African Green Monkey Kidney cells.

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